

**ASHLAND/NSP LAKEFRONT SITE**  
**DECEMBER 2003 PROGRESS REPORT (No. 1)**  
**WDNR BRRTS #02-02-00013**  
**CERCLA Docket No. V-W-04-C-764**

This is the first progress report prepared in accordance with the Administrative Order on Consent (AOC) for the Ashland/NSP Lakefront Site, effective November 14, 2003. It is intended to meet the requirements described in Task 8 of the Statement of Work appended to the AOC.

**Field Activities Completed**

This report includes the monitoring data for the interim tar removal system currently operating on the Xcel Energy property. Prior to this report, 11 quarterly monitoring reports were submitted to the Wisconsin Department of Natural Resources (WDNR). Each of these previous reports included the results of analyses of the previous quarter's groundwater monitoring samples collected from selected wells screened in the Copper Falls Aquifer, and air and water quality sample data for the tar removal system. These reports were prepared and submitted in accordance with an approved work plan for the interim system developed according to ch. NR 700, Wisconsin Administrative Code.

Quarterly progress report 011 included groundwater monitoring data collected during June 2003 and updated system data through May 2003. This first progress report under the AOC includes the groundwater monitoring for September, 2003 on the well network,<sup>1</sup> as well as the system data through October. This information is included on the attached tables. Laboratory reporting forms are appended. This same information was provided in the previous quarterly progress reports submitted to the WDNR.

URS provides quarterly groundwater monitoring services and is Xcel Energy's designated contractor to complete the tasks described in the AOC. URS has subcontracted to Coleman Engineering to perform routine operation and maintenance, including monthly monitoring, on the interim system. The treatment building containing the tar collection tank and water and air treatment units is located in the Xcel Energy service center building courtyard on the south side of St. Claire St.

Beginning in July and continuing through October, the City of Ashland performed pavement reconstruction on St. Claire St., which traverses the upper bluff/filled ravine study area. Several monitoring wells in the network sampled for the interim system are within the paved area. In addition, the pneumatic air delivery system line and effluent line from extraction well 4, located on the north side of the Xcel Energy storage yard, crosses below the street. The treatment system operated during this period, and was shutdown only twice for brief interruptions. The first occurred during August when the City installed a new sewer line on the south side of the street. This required lowering the extraction well 4 air system and effluent delivery lines. The second occurred during September, when Xcel Energy installed a new, more efficient air compressor in its service building.<sup>2</sup> Part of the pavement reconstruction also required

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<sup>1</sup> An expanded list of wells is sampled during March and September, and a reduced list sampled during June and December.

<sup>2</sup> Although the compressor is used for a variety of purposes, part of its function is to drive the air delivery system for the extraction well pumps.

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subexcavation of subgrade soils in the street right-of-way for replacement by engineered subbase materials for the pavement surface. During September, subexcavation of these soils in the area of the filled ravine occurred. Coleman Engineering was on-site at this time and screened excavated materials using visual, odor and field equipment (photoionization detector) techniques. Xcel Energy took possession of those materials that were identified as contaminated, stockpiled them on plastic and covered them to prevent potential runoff. These materials were stored on Xcel Energy's property at the northeast corner of Prentice Avenue and St. Claire Street. The stockpiled materials were characterized for landfill disposal and hauled off-site to Onyx/Superior's Seven-Mile Creek Landfill in Eau Claire. The materials were removed during two mobilizations on September 16-17 and October 7, 2003. Monitoring wells within the street right-of-way were also protected during the subexcavation work and were provided new protector covers when the street was paved in early October.

The interim tar removal system has operated as designed since June 2003. Important maintenance activities on the system during this period include the following:

- One of the two vapor effluent carbon removal drums was replaced during September (two drums are placed in series and no service interruption was necessary);
- From October 29<sup>th</sup> through November 19<sup>th</sup>, extraction well 3 did not operate because of a faulty pump controller; a new controller was installed in mid-November and the pump has operated since that time (though December 3<sup>rd</sup>);
- Northern Minnesota Services coordinated removal of approximately 750 gallons of tar from the collection tank on October 31<sup>st</sup>. This material was manifested as hazardous waste and conveyed to the WRR facility in Eau Claire.

As shown on Table 9 (attached) the system has removed over 7,000 gallons of coal tar from the Copper Falls Aquifer through November 2003. The same table also reports that over 800,000 gallons of groundwater has been treated and conveyed to the City of Ashland's wastewater treatment facility. The City established pretreatment discharge standards for the interim system prior to its construction in September 2000. The primary compounds monitored monthly for these standards include BTEX and PVOCS. The concentration results and the corresponding standards are shown on Table 5, along with the standards for the quarter and semi-annual compounds monitored.<sup>3</sup> Table 5 also includes data for these compounds collected during the September event. In the past, when the liquid phase carbon system has indicated breakthrough has occurred through monthly monitoring for BTEX, it has been shutdown for brief periods to allow carbon replacement. The most recent replacement occurred during March 2003. Monitoring since that time has shown that the system has operated within the constraints of the

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<sup>3</sup> The City indicated during a conversation in December 2003 that the PAH pretreatment standard of 0.1 µg/L is extreme, and that the current discharge measurements for this parameter are acceptable.

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design removal efficiency.<sup>4</sup>

Future data submittals to USEPA will include both the tabulated data as attached, and the electronic data in accordance with the EDMAN format required by Region 5. For this submittal, the Agency has agreed that these tabulated summaries are acceptable. The Agency has also indicated that Xcel Energy and its representatives will discuss the EDMAN submittal procedure at the RI/FS scoping meeting scheduled for January 8, 2004.

**Reporting Activities Completed**

Xcel Energy submitted an RI/FS Work Plan and Quality Assurance Project Plan (QAPP)<sup>5</sup> for the site as part of the AOC negotiations, during August 2003. USEPA conditionally approved the work plan and QAPP in late September, contingent on submittal of a Quality Management Plan (QMP) for URS, and minor revisions to the QAPP. The QMP was submitted during November, prior to the signing of the AOC; the QAPP revisions were submitted in early December. Xcel Energy confirmed with USEPA that it would not initiate the work until the AOC was signed. Per agreement with USEPA, this initial work has been modified to include only monitoring well installation in the Copper Falls Aquifer in the Upper Bluff/Filled Ravine area. This initial work scope deferral is the result of ongoing negotiations with the City for access.

This first progress report has been submitted concurrently with the Technical Letter Report (TLR) comparing the URS RI/FS Work Plan to a similar work plan prepared by SEH, WDNR's designated contractor for the site. SEH work plan was submitted in November and prepared in accordance with WDNR's cooperative agreement with USEPA. The AOC stipulates that Xcel Energy prepare the TLR comparing these two plans for technical content in preparation for the scoping meeting mentioned above. As described, that meeting is scheduled with representatives of Xcel Energy, USEPA and the WDNR for January 8, 2004, at Region 5 headquarters in Chicago.

**Field Activities Planned**

URS mobilized a contract driller to the site on December 8, 2003. Proposed monitoring wells MW-2C, MW-15A, and MW-15B on the Xcel Energy property, and MW-21B on the Our Lady of the Lake Parish property were installed over the subsequent two weeks. URS mobilized a groundwater sampling team to the site the week of December 15<sup>th</sup>, for routine quarterly sampling as part of the interim tar removal system. The team will sample the four new wells installed as

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<sup>4</sup> Note on Table 7 that the 'cumulative mass of hydrocarbons removed' fluctuates between some months, rather than showing constant increases. This is caused by the sample technique, and the likely variation in hydrocarbon concentrations between points in the vapor system. As shown on the table, some months report higher effluent hydrocarbon levels than influent levels. This is normal given the sampling technique (pump and Draeger tube), and the analytical accuracy.

<sup>5</sup> The QAPP was restricted to soil sample collection for the Upper Bluff/Filled Ravine, and monitoring well installation and subsequent groundwater collection for the Copper Falls Aquifer.

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part of this program. Additionally, the routine monthly monitoring of the system will occur at this time.

**Reporting Activities Planned**

The technical scoping scheduled for January 8<sup>th</sup> is intended to discuss and resolve any of the potential conflicts between the URS and SEH work plans, and for all parties to agree on an approach and work scope for Revision 01 of the URS RI/FS work plan. This Revision 01 work plan will be prepared and submitted by Xcel Energy 30 days following receipt of USEPA's summary of the technical meeting. This Revision 01 RI/FS work plan will include a project schedule, Field Sampling Plan, Quality Management Plan and Quality Assurance Project Plan in accordance with USEPA guidance.

As described above, the technical scoping meeting will also include a discussion of USEPA's EDMAN electronic data procedures, to clarify submittal requirements in accordance with this format. Future submittals of these monthly reports will include the appropriate analytical and field data generated during the previous reporting period in accordance with the EDMAN procedures. The data submitted with this report will be included with the first EDMAN submittal.

Attachments:

Table 1 - Summary of Groundwater Elevations

Table 2 - Summary of Free Phase Hydrocarbon Thickness

Table 3 - September 2003 Groundwater Monitoring Results – VOCs and Inorganics

Table 4 - September 2003 Groundwater Monitoring Results – SVOCs

Table 5 - Remediation System Water Quality Monitoring Results

Table 6 – Remediation System Air Monitoring Results

Table 7 – Air Sampling, Testing and Mass Emissions Results

Table 8 – Water Influent/Effluent Sampling, Testing and Mass Discharge Results

Table 9 – Summary of Coal Tar and Groundwater Volumes Removed

Appendix – Laboratory Reporting Forms

**Table 1**  
**Summary of Groundwater Elevations**  
**Northern States Power, Ashland, Wisconsin**

Well	Reference Elevation	Sep. 10, 2001	Dec. 3, 2001	Mar. 18, 2002	June 28, 2002	Sept. 16, 2002	Dec. 16, 2002	Mar. 24, 2003
Location	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations	Depth to Water	Groundwater Elevations
MW-1	634.18	15.08	619.10	14.26	619.92	--	14.79	619.39
MW-2	634.85	14.92	619.93	--	--	--	17.43	616.75
MW-2A	634.24	19.50	614.74	--	--	--	--	618.90
MW-2B	634.68	10.52	624.16	--	--	--	--	15.51
MW-2R*	637.43	--	--	--	14.70	622.73	15.00	622.43
MW-2AR*	636.23	--	--	--	20.13	616.15	20.25	616.03
MW-2BR*	636.24	--	--	--	11.97	624.27	12.03	624.21
MW-3	637.83	3.14	634.69	0.00	637.83	--	2.72	635.11
MW-4	640.92	6.40	631.63	4.98	636.05	5.60	635.43	5.02
MW-4A	641.22	14.28	626.94	14.20	627.02	13.50	627.72	13.10
MW-4B	640.98	16.61	624.37	15.32	625.66	16.27	624.71	16.73
MW-5	633.82	18.15	615.67	17.95	615.87	19.44	614.38	17.80
MW-5A	633.72	19.38	614.34	19.26	614.46	19.60	614.12	19.05
MW-5B	633.89	19.14	614.75	19.25	614.64	19.37	614.52	19.03
MW-5C	634.33	9.90	624.43	9.47	624.86	9.33	625.00	9.51
MW-6	644.88	17.01	627.87	15.95	628.93	--	14.25	630.63
MW-6A	644.79	20.31	624.49	19.76	625.03	--	20.02	624.77
MW-7	612.60	3.92	608.68	4.00	608.60	4.17	608.43	--
MW-7A	613.25	flowing	--	Rowing	--	--	--	--
MW-8	634.42	4.79	629.63	4.46	629.96	8.09	626.33	4.52
MW-8A	634.62	15.68	618.94	15.24	619.38	15.27	619.35	15.47
MW-9	637.98	5.92	632.06	--	--	--	4.58	633.40
MW-9A	637.86	13.66	624.20	13.25	624.61	13.21	624.65	13.32
MW-9B	638.02	13.80	624.22	13.28	624.74	13.30	624.72	13.86
MW-9C	637.95	13.67	624.28	13.28	624.67	13.22	624.73	14.06
MW-10	638.20	4.64	633.56	4.33	633.87	4.59	633.61	3.40
MW-10A	638.07	15.55	622.52	14.19	623.88	14.21	623.86	14.61
MW-10B	638.40	22.42	615.98	22.33	616.07	21.25	617.15	21.75
MW-11	636.13	8.62	627.51	6.23	629.90	--	6.20	629.93

Notes:

Reference elevation surveyed by Dames & Moore/URS  
\* New wells installed after February 2002.

**Table 1**  
**Summary of Groundwater Elevations**  
**Northern States Power, Ashland, Wisconsin**

Well Location	Reference Elevation	Sep. 10, 2001		Dec. 3, 2001		Mar. 15, 2002		June 28, 2002		Sept. 16, 2002		Dec. 16, 2002		Mar. 24, 2003		
		Depth to Water	Groundwater Elevations													
TW-13	635.72	9.54	626.29	4.58	631.25	4.71	631.12	3.86	631.97	4.50	631.33	--	--	6.06	629.66	
MW-13A	635.94	20.79	615.15	21.58	614.36	21.00	614.34	20.70	615.24	20.46	615.48	20.75	615.19	20.50	615.44	
MW-13B	635.90	20.83	615.07	21.21	614.69	20.75	615.15	20.62	615.28	20.13	615.77	20.25	615.85	19.98	615.92	
MW-13C	636.11	11.73	624.38	11.32	624.79	11.24	624.87	11.95	624.16	12.40	623.71	11.08	625.03	11.03	625.08	
MW-13D	637.09	11.81	625.28	11.39	625.70	11.39	625.70	12.03	625.06	12.52	624.57	11.16	625.93	11.08	626.01	
MW-14	639.15	4.33	634.82	4.92	634.23	--	--	--	--	3.00	636.15	4.35	634.80	--	--	
MW-15	641.21	4.52	636.69	4.33	636.88	3.60	637.61	3.52	637.89	3.73	637.48	5.10	636.11	4.68	636.53	
MW-16	642.20	1.74	640.46	1.05	641.15	--	--	0.40	641.80	1.66	640.54	4.20	638.00	8.03	634.17	
MW-17	633.88	2.64	631.24	--	--	3.29	630.59	2.56	631.32	2.24	631.64	4.98	628.90	--	--	
MW-17A*	633.68	19.94	613.74	--	--	20.18	613.50	19.90	613.78	19.77	613.91	19.32	614.36	19.80	613.88	
MW-18A*	635.57	--	--	--	--	20.50	615.07	20.22	615.35	20.24	615.33	19.93	615.64	20.16	615.41	
MW-18B*	635.52	--	--	--	--	13.46	622.06	13.75	621.77	13.98	621.54	13.12	622.40	13.31	622.21	
MW-19A*	636.76	--	--	--	--	21.27	615.49	20.41	616.35	20.90	615.86	20.58	616.18	20.66	616.10	
MW-19B*	636.65	--	--	--	--	11.74	624.91	11.58	625.07	12.38	624.27	11.25	625.40	10.90	625.75	
MW-20A*	642.65	--	--	--	--	24.30	618.35	24.25	618.40	24.81	617.84	24.37	618.28	24.85	617.80	
MW-21A*	637.82	--	--	--	--	21.75	616.07	20.87	616.95	21.57	616.25	21.26	616.56	21.7	616.12	
MW-22A*	638.34	--	--	--	--	--	19.41	619.23	19.57	619.44	19.16	619.18	19.56	618.75	--	
MW-22B*	638.50	--	--	--	--	--	14.56	623.94	14.79	623.71	13.80	624.70	13.87	624.63	--	
MW-1(NET)	608.40	7.30	601.10	7.47	600.93	8.00	600.40	7.17	601.23	7.09	601.31	7.67	600.73	8.27	600.13	
MW-2(NET)	608.23	7.11	601.12	7.24	600.99	7.79	600.44	6.95	601.28	--	--	--	--	7.98	600.25	
MW-2A(NET)	607.99	--	--	--	--	--	--	--	--	flowing	flowing	flowing	flowing	flowing	flowing	--
MW-2B(NET)	608.50	--	--	--	--	--	--	--	--	flowing	flowing	flowing	flowing	flowing	flowing	flowing
MW-3(NET)	612.10	7.17	604.93	11.25	600.85	11.38	600.72	10.75	601.35	10.38	601.72	11.52	600.58	12.24	599.86	
TW-11	606.80	5.75	601.05	5.75	601.05	5.74	601.06	3.58	603.22	3.75	603.05	6.00	600.80	5.99	600.81	
TW-12	608.45	--	--	--	--	--	--	7.38	601.07	--	--	--	--	8.48	599.97	

Notes:

\* Reference elevation surveyed by Barnes & Moore/URS  
\* New wells installed after February 2002.

**Table 1**  
**Summary of Groundwater Elevations**  
**Northern States Power, Ashland, Wisconsin**

Well Location	Reference Elevation	June 23, 2003	September 29, 2003
		Depth to Water	Groundwater Elevations
MW-1	634.18	14.51	619.67
MW-2R*	637.43	15.59	621.84
MW-2BR*	636.28	21.09	615.19
MW-2BR*	636.24	11.67	624.57
MW-3	637.83	2.60	635.23
MW-4	640.92	5.07	635.85
MW-4A	641.22	13.74	627.48
MW-4B	640.98	16.72	624.26
MW-5	633.82	19.20	614.62
MW-5A	633.72	19.18	614.54
MW-5B	633.89	19.15	614.74
MW-5C	634.33	10.07	624.26
MW-6	644.88	15.28	629.80
MW-6A	644.79	20.10	624.69
MW-7	612.60	—	
MW-7A	613.25	flowing	—
MW-8	634.42	4.29	630.13
MW-8A	634.62	15.67	618.95
MW-9	637.98	4.54	633.44
MW-9A	637.86	14.21	623.65
MW-9B	638.02	13.23	624.79
MW-9C	637.95	14.28	623.67
MW-10	638.20	3.98	634.22
MW-10A	638.07	14.67	623.40
MW-10B	638.40	22.52	615.88
MW-11	636.13	6.62	629.51

Notes:

Reference elevation surveyed by Dames & Moore/URS

\* New wells installed after February 2002.

At the time of report preparation, September 2003 field data was unavailable, this information will be supplied as soon as it becomes available.

**Table 1**  
**Summary of Groundwater Elevations**  
**Northern States Power, Ashland, Wisconsin**

Well	Reference Location	Elevation	June 23, 2003 Depth to Water	Groundwater Elevations	September 29, 2003 Depth to Water	Groundwater Elevations
TW-13		635.72	4.74	630.98		
MW-13A		635.94	21.55	614.39		
MW-13B		635.90	21.38	614.52		
MW-13C		636.11	12.21	623.90		
MW-13D		637.09	12.25	624.84		
MW-14		639.15	3.78	635.37		
MW-15		641.21	4.22	636.99		
MW-16		642.20	0.73	641.47		
MW-17		633.88	2.26	631.62		
MW-17A*		633.68	19.82	613.86		
MW-18A*		635.57	20.35	615.22		
MW-18B*		635.52	13.74	621.78		
MW-19A*		636.76	21.05	615.71		
MW-19B*		636.65	12.15	624.50		
MW-20A*		642.65	24.85	617.80		
MW-21A*		637.82	21.84	615.98		
MW-22A*		638.34	19.47	618.87		
MW-22B*		638.50	14.58	623.92		
MW-1(NET)		608.40	7.41	600.99		
MW-2(NET)		608.23	7.16	601.07		
MW-2A(NET)		607.99	flowing	--		
MW-2B(NET)		608.50	flowing	--		
MW-3(NET)		612.10	11.76	600.34		
TW-11		606.80	6.09	600.71		
TW-12		608.45	7.66	600.79		

Notes:

Reference elevation surveyed by Dames & Moore/URS

\* New wells installed after February 2002.

At the time of report preparation, September 2003 field data was unavailable, this information will be supplied as soon as it becomes available.

**Table 2**  
**Summary of Free Phase Hydrocarbon Thickness**  
**Northern States Power, Ashland, Wisconsin**

Well Location	October 6, 1998			November 23, 1998			June 2, 1999			
	Depth to Bottom	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	41.45	12.06	12.25	40.09	13.42	13.5	35.25	18.26	18.2
MW-7	17.88	(1)	(1)	10.14	(1)	(1)	10.01	(1)	(1)	9.91
MW-9	14.62	13.78	0.84	2.73	14.2	0.42	3.6	14.03	0.59	—
TW-13	14.82	(2)	(2)	(2)	(2)	(2)	(2)	18.10	0.31	2.2
MW-13A	45.33	43.22	2.11	4.73	43.36	1.97	3	43.37	1.96	—
MW-13B	69.82	43.56	26.26	26.1	43.56	26.26	27.6	52.28	17.54	—
MW-15	15.59	14.78	0.81	2.94	13.93	1.66	2.09	13.26	2.33	2.6
Well Location	August 23, 1999			November 29, 1999			September 27, 2000			
	Depth to Bottom	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	34.31	19.2	(2)	(2)	(2)	16.2	(2)	(2)	(2)
MW-7	17.88	(1)	(1)	10.44	(2)	(2)	0	(2)	(2)	(2)
MW-9	14.62	13.02	1.6	(2)	(2)	(2)	<1 inch	(2)	(2)	(2)
TW-13	14.82	(2)	< 6 inches	< 6 inches	(2)	(2)	<1 inch	14.32	0.5	0.5
MW-13A	45.33	(1)	(1)	8.5	(2)	(2)	2.1	44.33	1.0	1.0
MW-13B	69.82	(1)	(1)	26	(2)	(2)	12.1	57.49	12.33	12.33
MW-15	15.59	(1)	(1)	10.6	(2)	(2)	0.67	(2)	(2)	(2)
Well Location	December 4, 2000			March 27, 2001			June 11, 2001			
	Depth to Bottom	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	—	—	Not Measured	—	—	47.51	6.00	6.00
EW-2	50.00	Not Measured	—	—	Not Measured	—	—	40.5	9.50	9.50
EW-3	70.00	Not Measured	—	—	Not Measured	—	—	68.58	1.42	1.42
MW-2A	44.41	Not Measured	—	—	41.66	2.75	2.75	40.37	4.04	4.04
MW-7	17.88	Frozen	—	—	Frozen	—	—	Damaged	—	—
MW-9	14.62	14.5	0.1	0.1	(2)	(2)	(2)	(2)	(2)	(2)
MW-10B	34.91				34.66	0.25	0.25	34.33	0.58	0.58
TW-13	14.82	14.57	0.25	0.25	14.74	0.08	0.08	(2)	(2)	(2)
MW-13A	45.33	44.25	1.08	44.25	1.08	1.08	1.08	44.83	0.50	0.50
MW-13B	69.82	57.24	12.58	55.86	13.96	13.96	13.96	58.65	11.17	11.17
MW-15	15.59	15.17	0.42	0.25	12.84	2.75	2.75	15.34	0.25	0.25

(1) Free-phase hydrocarbons not detected by interface probe; free-phase hydrocarbons observed on tape.

(2) Product not encountered.

Hydrocarbon thickness in well is difference between depth to bottom and depth to hydrocarbon/water interface.

\* New wells installed in February 2002.

\*\* MW-2A was replaced by MW-2AR in February 2002.

**Table 2**  
**Summary of Free Phase Hydrocarbon Thickness**  
**Northern States Power, Ashland, Wisconsin**

Well Location	Depth to Bottom	September 10, 2001			December 3, 2001			March 18, 2002		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	-	-	Not Measured	-	-	Not Measured	-	-
EW-2	50.00	Not Measured	-	-	Not Measured	-	-	Not Measured	-	-
EW-3	70.00	Not Measured	-	-	Not Measured	-	-	Not Measured	-	-
MW-2A*	44.41	41.33	3.08	3.08	Not Measured	-	-	43.45**	1.63	1.63
MW-7	17.88	Damaged	-	-	Damaged	-	-	Damaged	-	-
MW-9	14.62	Not Measured	-	-	Not Measured	-	-	Not Measured	-	-
MW-10B	34.91	34.41	0.5	0.5	34.58	0.33	34.58	0.33	0.33	0.33
TW-13	14.82	(2)	(2)	(2)	14.74	0.08	0.08	14.74	0.08	0.08
MW-13A	45.33	43.83	0.58	0.58	43.91	0.5	0.5	44.75	0.58	0.58
MW-13B	69.82	58.99	10.83	10.83	59.65	10.17	10.17	58.32	11.50	11.50
MW-15	15.59	15.26	0.33	0.33	15.34	0.25	0.25	15.51	0.08	0.08
MW-18A*	44.86	-	-	-	-	-	-	(2)	(2)	(2)
MW-19A*	45.20	-	-	-	-	-	-	(2)	(2)	(2)
MW-21A*	46.26	-	-	-	-	-	-	46.25*	0.01*	0.01*
Well Location	Depth to Bottom	June 28, 2002			September 16, 2002			December 16, 2002		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	-	-	Not Measured	-	-	Not Measured	-	-
EW-2	50.00	Not Measured	-	-	Not Measured	-	-	Not Measured	-	-
EW-3	70.00	Not Measured	-	-	Not Measured	-	-	Not Measured	-	-
EW-4	29.50	29.25	0.25	0.25	(2)	(2)	(2)	Not Measured	-	-
MW-2AR*	29.40	28.23	1.17	1.17	(2)	(2)	(2)	Not Measured	-	-
MW-2A*	45.08	44.31	0.77	0.77	41.08	4.00	4.00	39.88	5.20	5.20
MW-7	17.88	Abandoned	-	-	Abandoned	-	-	Abandoned	-	-
MW-9	14.62	Not Measured	-	-	(2)	(2)	(2)	Not Measured	-	-
MW-10B	34.91	34.08	0.83	0.73	33.74	1.17	1.17	33.40	1.51	1.51
TW-13	14.82	Trace	-	-	Trace	-	-	Trace	-	-
MW-13A	45.33	45.25	0.08	0.08	44.33	1.00	1.00	44.33	1.00	1.00
MW-13B	69.82	67.99	1.83	1.83	59.40	10.42	10.42	58.32	11.50	11.50
MW-15	15.59	15.46	0.13	0.13	15.55	0.04	0.04	15.46	0.13	0.13
MW-18A*	44.86	(2)	(2)	1	(2)	(2)	(2)	(2)	(2)	(2)
MW-19A*	45.20	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)	(2)
MW-21A*	46.26	Trace	-	-	Trace	-	-	(2)	(2)	(2)
MW-22A*	27.55	(2)	(2)	(2)	(2)	(2)	(2)	27.42	0.13	0.13

(1) Free-phase hydrocarbons not detected by interface probe; free-phase hydrocarbons observed on tape.

(2) Product not encountered.

Hydrocarbon thickness in well is difference between depth to bottom and depth to hydrocarbon/water interface.

\* New wells installed in February and June of 2002.

\*\* MW-2A was replaced by MW-2AR in February 2002.

**Table 2**  
**Summary of Free Phase Hydrocarbon Thickness**  
**Northern States Power, Ashland, Wisconsin**

Well Location	Depth to Bottom	March 24, 2003			June 23, 2003			September 29, 2003		
		Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape	Depth to Hydrocarbon	Feet in Well	Feet on Tape
EW-1	53.51	Not Measured	-	-	Not Measured	-	-	(4)	(4)	(4)
EW-2	50.00	Not Measured	-	-	Not Measured	-	-	(4)	(4)	(4)
EW-3	70.00	Not Measured	-	-	Not Measured	-	-	(4)	(4)	(4)
EW-4	29.50	Not Measured	-	-	Not Measured	-	-	(4)	(4)	(4)
MW-2R*	29.40	27.32	2.08	2.08	28.02	1.38	1.38	(4)	(4)	(4)
MW-2AR*	45.08	40.91	4.17	4.17	38.08	7.00	7.00	(4)	(4)	(4)
MW-7	17.88	Abandoned	-	-	Abandoned	-	-	(4)	(4)	(4)
MW-9	14.62	Net Measured	-	-	Not Measured	-	-	(4)	(4)	(4)
MW-10B	34.91	Not Measured	--	--	33.24	1.67	1.67	(4)	(4)	(4)
TW-13	14.82	Trace	-	-	(2)	(2)	(2)	(4)	(4)	(4)
MW-13A	45.33	44.06	1.27	1.27	44.33	Trace	Trace	(4)	(4)	(4)
MW-13B	69.82	58.00	11.82	11.82	(3)	(3)	(3)	(4)	(4)	(4)
MW-15	15.59	15.49	0.10	0.10	15.14	0.45	0.45	(4)	(4)	(4)
MW-8A*	44.86	(2)	(2)	(2)	(2)	(2)	(2)	(4)	(4)	(4)
MW-19A*	45.20	(2)	(2)	(2)	(2)	(2)	(2)	(4)	(4)	(4)
MW-21A*	46.26	(2)	(2)	(2)	Trace	Trace	Trace	(4)	(4)	(4)
MW-22A*	27.55	27.26	0.29	0.29	(2)	(2)	(2)	(4)	(4)	(4)

(1) Free-phase hydrocarbons not detected by interface probe; free-phase hydrocarbons observed on tape.

(2) Product not encountered.

(3) Measuring device did not reach the well bottom. Suspected obstruction near well screen.

Hydrocarbon thickness in well is difference between depth to bottom and depth to hydrocarbon/water interface.

Hydrocarbon thickness on tape measure after probe removed from the well.

\* New wells installed in February and June of 2002.

\*\* MW-2A was replaced by MW-2AR in February 2002.

(4) At the time of report preparation, September 2003 field data was unavailable, this information will be supplied as soon as it becomes available.

**Table 3**  
**September 2003**  
**Groundwater Monitoring Results - VOCs and Inorganics**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	MW-2BR	MW-4A	MW-4B	MW-5A	MW-5B	MW-5B Dup	MW-5C	MW-6A	MW-7A	PAL	ES
Cyanide	mg/L	0.017	0.014	<0.005	<0.011>	0.040	0.042	<0.005	<0.005	<0.005	40	200
<b>Inorganics</b>												
Benzene	µg/L	3,000	15,000	<0.27>	49,000	5,200	7,100	2,7	<0.23	2,800	0.5	5
n-Butylbenzene	µg/L	<180	<230	<0.23	<460	<120	<120	<0.23	<0.23	<120	--	--
sec-Butylbenzene	µg/L	<200	<250	<0.25	<500	<130	<130	<0.25	<0.25	<130	--	--
Ethylbenzene	µg/L	<460>	2,100	<0.21	2,100	<140>	<160>	<0.21	<0.21	<290>	140	700
Isopropylbenzene	µg/L	<150	<180	<0.18	<370	<92	<92	<0.18	<0.18	<92	--	--
p-Isopropyltoluene	µg/L	<180	<230	<0.23	<450	<110	<110	<0.23	<0.23	<110	--	--
Naphthalene	µg/L	4,700	7,800	<1.3>	<21000>	710	1,000	2.4	<0.39	5,200	8	40
n-Propylbenzene	µg/L	<220	<270	<0.27	<540	<140	<140	<0.27	<0.27	<140	--	--
Toluene	µg/L	6,800	6,600	<0.23	3,200	2,600	3,600	<0.63>	<0.23	4,200	200	1,000
1,2,4-Trimethylbenzene	µg/L	<270>	<470>	<0.24	<480	<120	<120	<0.24	<0.24	<360>	--	--
1,3,5-Trimethylbenzene	µg/L	<220	<270	<0.27	<540	<140	<140	<0.27	<0.27	<140	96	480
Total Trimethylbenzene	µg/L	<270>	<470>	<0.27	<540	<140	<140	<0.27	<0.27	<360>	--	--
Xylene, Total	µg/L	2,900	3,400	<0.37	1,760	630	840	<0.37	<0.37	2,090	1,000	10,000
<b>Total VOCs</b>	µg/L	<b>18,130</b>	<b>35,370</b>	<b>1.6</b>	<b>28,160</b>	<b>9,280</b>	<b>12,700</b>	<b>5.7</b>	<b>0.0</b>	<b>14,940</b>		

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification

L - Common lab solvent and contaminant

Concentrations exceeding the ES have been shaded

**Table 3**  
**September 2003**  
**Groundwater Monitoring Results - VOCs and Inorganics**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	MW-8A	MW-8A Dup	MW-9A	MW-9B	MW-9C	MW-10A	MW-13A	MW-13C	MW-13D	PAL	ES	
		mg/L	0.018	<0.008>	<0.005	0.026	0.13	<0.005	<0.006>	<0.005	40	200	
<b>Inorganics</b>													
<b>VOCs</b>													
Benzene	ug/L	18,000	17,000	59	2,700	2.2	<0.41>	42,000	8,1	<0.23	0.5	5	
n-Butylbenzene	ug/L	<460	<460	<2.3	<46	<0.58	<0.23	<920	<0.23	<0.23	--	--	
sec-Butylbenzene	ug/L	<500	<500	<2.5	<50	<0.63	<0.25	<1,000	<0.25	<0.25	--	--	
Ethylbenzene	ug/L	<650>	<590>	9.3	140	<0.93>	<0.21	<820	<0.44>	<0.21	140	700	
Isopropylbenzene	ug/L	<370	<370	<1.8	<37	<0.46	<0.18	<730	<0.18	<0.18	--	--	
p-isopropyltoluene	ug/L	<450	<450	<2.3	<45	<0.57	<0.23	<910	<0.23	<0.23	--	--	
Naphthalene	ug/L	<780	<780	120	1,200	23	3.6	6,400	8.4	<0.89>	8	40	
n-Propylbenzene	ug/L	<540	<540	<2.7	<54	<0.68	<0.27	<1,100	<0.27	<0.27	--	--	
Toluene	ug/L	<1,200>	<1,100>	<2.3	690	10	<0.36>	19,000	4.6	<0.23	200	1,000	
1,2,4-Trimethylbenzene	ug/L	<480	<480	<6.2>	<81>	<1.4>	<0.24	<960	<0.28>	<0.23	--	--	
1,3,5-Trimethylbenzene	ug/L	<540	<540	<2.7	<54	<0.25	<0.27	<1,100	<0.27>	<0.27	96	480	
Total Trimethylbenzene	ug/L	<540	<540	<6.2>	<81>	<1.4>	<0.27	<1,100	<0.28>	<0.27	--	--	
Xylenes, Total	ug/L	<740	<740	36	440	7.1	<0.93>	3,600	1.9	<0.37	1,000	10,000	
<b>Total VOCs</b>	ug/L	19,850	18,690	231	5,251	44.6	5.3	71,000	23.7	<0.89>			

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification

L - Common lab solvent and contaminant

TB - Trip Blank

Concentrations exceeding the ES have been shaded

**Table 3**  
**September 2003**  
**Groundwater Monitoring Results - VOCs and Inorganics**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	MW-17A	MW-18A	MW-18B	MW-19A	MW-19B	MW-19B Dup	MW-20A	MW-21A	PAL	ES
Cyanide	mg/L	<0.005	0.016	<0.005	<0.011>	<0.005	<0.005	<0.005	<0.006>	40	200
<b>Inorganics</b>											
<b>VOCs</b>											
Benzene	ug/L	<0.26>	38,000	120	30,000	3,200	3,700	<0.23	1,400	0.5	5
n-Butylbenzene	ug/L	<0.23	<92	<2.3	<580	<46	<46	<0.23	<120	--	--
sec-Butylbenzene	ug/L	<0.25	<100	<2.5	<630	<50	<50	<0.25	<131	--	--
Ethylbenzene	ug/L	<0.21	1,600	<4.9>	<520	150	170	<0.21	<170>	140	700
Isopropylbenzene	ug/L	<0.18	<73	<1.8	<460	<37	<37	<0.18	<92	--	--
p-Isopropyltoluene	ug/L	<0.23	<91	<2.3	<570	<45	<45	<0.23	<110	--	--
Naphthalene	ug/L	2.7	3,800	48	6,700	2,600	3,200	<0.39	5,200	8	40
n-Propylbenzene	ug/L	<0.27	<110	<2.7	<680	<54	<54	<0.27	<140	--	--
Toluene	ug/L	<0.45>	13,000	120	15,000	3,600	4,000	<0.23	2,500	200	1,000
1,2,4-Trimethylbenzene	ug/L	<0.24	<96	<2.6>	<600	170	190	<0.24	<300>	--	--
1,3,5-Trimethylbenzene	ug/L	<0.27	<110	<2.7	<680	<54	<54	<0.27	<140	96	480
Total Trimethylbenzene	ug/L	<0.27	<110	<2.6>	<680	170	190	<0.27	<300>	--	--
Xylene, Total	ug/L	<0.19>	2,680	33	3,200	1,300	1,400	<0.37	1,670	1,000	10,000
<b>Total VOCs</b>	ug/L	<b>3.6</b>	<b>59,080</b>	<b>329</b>	<b>54,900</b>	<b>11,020</b>	<b>12,660</b>	<b>0.0</b>	<b>11,240</b>		

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification

L - Common lab solvent and contaminant

TB - Trip Blank

Concentrations exceeding the ES have been shaded

**Table 3**  
**September 2003**  
**Groundwater Monitoring Results - VOCs and Inorganics**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	MW-22A	MW-22B	AW-1	AW-2	MW-2ANET	MW-2BNET	Trip Blank	PAL	ES
<b>Inorganics</b>										
Cyanide	mg/L	0.13	0.072	<0.005	<0.005	0.044	0.02	--	40	200
<b>VOCs</b>										
Benzene	µg/L	36,000	<0.45	<0.23	<0.23	5.6	19,000	<0.23	0.5	5
n-Butylbenzene	µg/L	<1,200	<0.46	<0.23	<0.23	<1.2	<460	<0.23	--	--
sec-Butylbenzene	µg/L	<1,300	<0.50	<0.25	<0.25	<1.3	<500	<0.25	--	--
Ethylibenzene	µg/L	<920	<0.41	<0.21	<0.21	<3.0>	<3,100	<0.21	140	700
Isopropylbenzene	µg/L	<1,100	<0.37	<0.18	<0.18	<0.92	<370	<0.18	--	--
p-Isopropyltoluene	µg/L	<2,000	<0.45	<0.23	<0.23	<1.1	<450	<0.23	--	--
Naphthalene	µg/L	8,000	15	<0.39	<0.39	72	4,400	<0.39	8	40
n-Propylbenzene	µg/L	<1,400	<0.54	<0.27	<0.27	<1.4	<540	<0.27	--	--
Toluene	µg/L	17,000	<0.59>	<0.23	<0.23	17	7,900	<0.23	200	1,000
1,2,4-Trimethylbenzene	µg/L	<1,200	<0.62>	<0.24	<0.24	5.1	<480	<0.24	--	--
1,3,5-Trimethylbenzene	µg/L	<1,400	<0.54	<0.27	<0.27	<1.4	<540	<0.27	96	480
Total Trimethylbenzene	µg/L	<1,400	<0.62>	<0.27	<0.27	5.1	<540	<0.27	--	--
Xylene, Total	µg/L	3,700	<0.44>	<0.37	<0.37	20.2	3,000	<0.37	1000	10,000
<b>Total VOCs</b>	µg/L	64,700	16.7	0.00	0.00	123	37,400	0.00		

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification

L - Common lab solvent and contaminant

TB - Trip Blank

Concentrations exceeding the ES have been shaded

**Table 4**  
**September 2003 Groundwater Monitoring Results - SVOCs**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	MW-2BR	MW-4A	MW-4B	MW-5A	MW-5B	MW-5B Dup	MW-5C	MW-6A	PAL	ES
<b>SVOCs</b>											
Aceanaphthalene	µg/L	<67	<130	<0.67	<67	<130	<130	<0.67	<0.67	-	-
Aceanaphthylene	µg/L	<130	<370 <sup>b</sup>	<1.3	<130	<260	<280 <sup>a</sup>	<1.3	<1.3	-	-
Anthracene	µg/L	<41	<82	<0.41	<41	<82	<82	<0.41	<0.41	600	3,000
Benz[a]anthracene	µg/L	<43	<86	<0.43	<43	<86	<86	<0.43	<0.43	-	-
Benz[e]pyrene	µg/L	<42	<85	<0.42	<42	<85	<85	<0.42	<0.42	0.02	0.2
Benz[b]fluoranthene	µg/L	<56	<110	<0.56	<56	<110	<110	<0.56	<0.56	0.02	0.2
Benz[g,h,i]perylene	µg/L	<91	<180	<0.91	<91	<180	<180	<0.91	<0.91	-	-
Benz[k]fluoranthene	µg/L	<90	<180	<0.90	<90	<180	<180	<0.90	<0.90	-	-
Benzyl Butyl Phthalate	µg/L	<170	<330	<1.7	<170	<330	<330	<1.7	<1.7	-	-
Chrysene	µg/L	<120	<230	<1.2	<120	<230	<230	<1.2	<1.2	0.02	0.2
Di-n-Butylphthalate	µg/L	<58	<120	<0.58	<58	<210	<210	<0.58	<0.58	-	-
Dibenz[a,h]anthracene	µg/L	<56	<110	<0.56	<56	<110	<110	<0.56	<0.56	20	100
2,4-Dimethylphenol	µg/L	<160	<680 <sup>b</sup>	<1.6	820	<920 <sup>a</sup>	<1000 <sup>a</sup>	<1.6	<1.6	-	-
Fluoranthene	µg/L	<42	<83	<0.42	<42	<83	<83	<0.42	<0.42	80	400
Fluorane	µg/L	<61	<120	<0.61	<61	<120	<120	<0.61	<0.61	80	400
Indeno[1,2,3-cd]Pyrene	µg/L	<54	<110	<0.54	<54	<110	<110	<0.54	<0.54	-	-
2-Methylnaphthalene	µg/L	490	1,700	<0.76	<200 <sup>a</sup>	1,000	1,200	2.5	<0.76	-	-
2-Methylphenol	µg/L	<120	<320 <sup>b</sup>	<1.2	400	880	1,100	<1.2	<1.2	-	-
3 & 4-Methylphenol	µg/L	<130	<580 <sup>b</sup>	<1.3	<340 <sup>a</sup>	1,600	1,700	<1.3	<1.3	-	-
Naphthalene	µg/L	3,700	8,500	<2.2 <sup>a</sup>	2,500	6,800	7,700	13	<0.73	8	40
Phenanthrene	µg/L	<41	<82	<0.41	<41	<82	<82	<0.41	<0.41	-	-
Phenol	µg/L	<51	<180 <sup>b</sup>	<0.51	<51	610	610	<0.51	<0.51	-	-
Pyrene	µg/L	<98	<200	<0.98	<98	<200	<200	<0.98	<0.98	50	250
Total SVOCs	µg/L	4,190	12,330	2.2	4,260	11,910	13,590	15.5	0.0		

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification  
Concentrations exceeding the ES have been shaded

**Table 4**  
**September 2003 Groundwater Monitoring Results - SVOCs**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	SVOCs									PAL	ES
		MW-7A	MW-8A	MW-8A Dup	MW-9A	MW-9B	MW-9C	MW-10A	MW-13A	PAL		
Aceanaphthene	µg/L	<130	<6.7	<6.7	<0.67	25	<1.3	<0.67	<130	--	--	--
Aceanaphthylene	µg/L	<350>	<13	<13	<1.9>	97	<4.7>	<1.3	<330>	--	--	--
Anthracene	µg/L	<82	<4.1	<4.1	<0.41	21	<0.82	<0.41	<82	600	3,000	--
Benz(a)anthracene	µg/L	<86	<4.3	<4.3	<0.43	8.60	<0.86	<0.43	<86	--	--	--
Benz(a)pyrene	µg/L	<85	<4.2	<4.2	<0.42	<6.3>	<0.85	<0.42	<85	0.02	0.2	--
Benz(b)fluoranthene	µg/L	<110	<5.6	<5.6	<0.56	<3.1>	<1.1	<0.56	<110	0.02	0.2	--
Benz(g,h,i)perylene	µg/L	<180	<9.1	<9.1	<0.91	<4.6	<1.8	<0.91	<180	--	--	--
Benz(k)fluoranthene	µg/L	<180	<9.0	<9.0	<0.90	<4.5	<1.8	<0.90	<180	--	--	--
Benzyl Butyl Phthalate	µg/L	<330	<17	<17	<1.7	<8.3	<3.3	<1.7	<330	--	--	--
Chrysene	µg/L	<230	<12	<12	<1.2	<7.1>	<2.3	<1.2	<230	0.02	0.2	--
Di-n-Butylphthalate	µg/L	<120	<5.8	<5.8	<0.58	<2.9	<1.2	<0.58	<210	--	--	--
Dibenz(a,h)anthracene	µg/L	<110	<5.6	<5.6	<0.56	<2.8	<1.1	<0.56	<110	20	100	--
2,4-Dimethylphenol	µg/L	<320	360	310	<1.6	100	<3.2	<1.6	1,300	--	--	--
Fluoranthene	µg/L	<83	<4.2	<4.2	<0.42	19	<0.83	<0.42	<83	80	400	--
Fluorene	µg/L	<120	<6.1	<6.1	<0.61>	42	<1.2	<0.61	<120	80	400	--
Indeno(1,2,3-cd)Pyrene	µg/L	<110	<5.4	<5.4	<0.54	<2.7	<1.1	<0.54	<110	--	--	--
2-Methylnaphthalene	µg/L	1,200	<7.6	<7.6	10	240	19	<0.76	1,200	--	--	--
2-Methylphenol	µg/L	<240	260	200	<1.2	71	<2.4	<1.2	<630>	--	--	--
3 & 4 Methylphenol	µg/L	<250	150	100	<1.3	58	<2.5	<1.3	<820>	--	--	--
Naphthalene	µg/L	5,400	74	150	41	620	68	4.5	6,600	8	40	--
Phenanthrene	µg/L	<82	<4.1	<4.1	<0.30>	69	<1.8>	<0.41	<82	--	--	--
Phenol	µg/L	<100	47	31	<0.51	<2.5	<1.0	<0.51	<140>	--	--	--
Pyrene	µg/L	<200	<9.8	<9.8	<0.98	22	<2.0	<0.98	<200	50	250	--
Total SVOCs	µg/L	6,950	891	791	54.5	1410.4	93.5	4.5	11,020			

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification

Concentrations exceeding the ES have been shaded

**Table 4**  
**September 2003 Groundwater Monitoring Results - SVOCs**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	MW-13C	MW-13D	MW-17A	MW-18A	MW-18B	MW-19A	MW-19B	MW-19B Dup	PAL	ES
<b>SVOCs</b>											
Acenaphthene	µg/L	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	<0.67	--	--
Acenaphthylene	µg/L	<1.5>	<1.3	<1.3	<1.3	<120>	<1.3	<480>	<180>	<150>	--
Anthracene	µg/L	<0.41	<0.41	<0.41	<0.41	<21	<0.41	<82	<41	<41	600
Benz(a)anthracene	µg/L	<0.43	<0.43	<0.43	<0.43	<21	<0.43	<86	<43	<43	3,000
Benz(a)pyrene	µg/L	<0.42	<0.42	<0.42	<0.42	<21	<0.42	<85	<42	<42	0.02
Benz(b)fluoranthene	µg/L	<0.56	<0.56	<0.56	<0.56	<28	<0.56	<110	<56	<56	0.02
Benz(g,h,i)perylene	µg/L	<0.91	<0.91	<0.91	<0.91	<46	<0.91	<180	<91	<91	--
Benz(k)fluoranthene	µg/L	<0.90	<0.90	<0.90	<0.90	<45	<0.90	<180	<90	<90	--
Benzyl Butyl Phthalate	µg/L	<1.7	<1.7	<1.7	<1.7	<83	<1.7	<330	<170	<170	--
Chrysene	µg/L	<1.2	<1.2	<1.2	<1.2	<58	<1.2	<230	<120	<120	0.02
Di-n-Butylphthalate	µg/L	<0.58	<0.58	<0.58	<0.58	<29	<0.58	<210	<58	<58	--
Dibenz(a,h)anthracene	µg/L	<0.56	<0.56	<0.56	<0.56	<28	<0.56	<110	<56	<56	20
2,4-Dimethylphenol	µg/L	<1.6	<1.6	<1.6	<1.6	3,700	<1.6	1,700	<160	<160	--
Fluoranthene	µg/L	<0.42	<0.42	<0.42	<0.42	<21	<0.42	<42	<42	<42	400
Fluorene	µg/L	<0.65>	<0.61	<0.61	<0.61	<30	<0.61	<120	<61	<61	80
Indeno(1,2,3-cd)Pyrrene	µg/L	<0.54	<0.54	<0.54	<0.54	<27	<0.54	<110	<54	<54	--
2-Methylnaphthalene	µg/L	<b>5.8</b>	<0.76	<0.76	<b>540</b>	<1.5>	<b>1,900</b>	<b>650</b>	<b>570</b>	<b>570</b>	--
2-Methylphenol	µg/L	<1.2	<1.2	<1.2	2,900	<1.2	970	<120	<120	<120	--
3 & 4-Methylphenol	µg/L	<1.3	<1.3	<1.3	3,500	<1.3	1,300	<130	<130	<130	--
Naphthalene	µg/L	<b>26</b>	<2.3>	4.7	3,700	23	<b>9,800</b>	<b>3,500</b>	<b>3,200</b>	<b>3,200</b>	8
Phenanthrene	µg/L	<1.1>	<0.41	<0.41	<20	<0.41	<82	<41	<41	<41	--
Phenol	µg/L	<0.51	<0.51	<0.51	830	<0.51	390	<51	<51	<51	--
Pyrene	µg/L	<0.98	<0.98	<0.98	<0.98	<19	<0.98	<200	<98	<98	50
Total SVOCs	µg/L	<b>35.1</b>	<b>2.3</b>	<b>4.7</b>	<b>15,290</b>	<b>24.5</b>	<b>16,540</b>	<b>4,330</b>	<b>3,920</b>		

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification

Concentrations exceeding the ES have been shaded

**Table 4**  
**September 2003 Groundwater Monitoring Results - SVOCs**  
**Northern States Power, Ashland, Wisconsin**

Analyte	Units	MW-20A	MW-21A	MW-22A	MW-22B	AW-1	AW-2	MW-2A NET	MW-2B NET	PAL	ES
<b>SVOCs</b>											
Aceanaphthalene	µg/L	<0.67	<130	<130	<0.67	<0.67	<0.67	<1.3	<3.3	-	-
Aceanaphthylene	µg/L	<1.3	<330>	<550>	5.8	<1.3	<2.6	<11.0>	-	-	-
Anthracene	µg/L	<0.41	<82	<82	3.9	<0.41	<0.82	600	3,000	-	-
Benz(a)anthracene	µg/L	<0.43	<86	<86	<0.43	<0.43	<0.86	<2.1	-	-	-
Benz(a)pyrene	µg/L	<0.42	<85	<85	<0.42	<0.42	<0.85	<2.1	0.02	0.2	0.2
Benz(b)fluoranthene	µg/L	<0.56	<110	<110	<0.56	<0.56	<0.56	<1.1	<2.8	0.02	0.2
Benz(g,h,i)perylene	µg/L	<0.91	<180	<180	<0.91	<0.91	<0.91	<1.8	<4.6	-	-
Benz(k)fluoranthene	µg/L	<0.90	<180	<180	<0.90	<0.90	<0.90	<1.8	<4.5	-	-
Benzyl Butyl Phthalate	µg/L	<1.7	<330	<330	<1.7	<1.7	<1.7	<3.3	<8.3	-	-
Chrysene	µg/L	<1.2	<230	<230	<1.2	<1.2	<1.2	<2.3	<5.8	0.02	0.2
Di-n-Butylphthalate	µg/L	<0.58	<210	<210	<0.58	<0.58	<0.58	<1.2	<2.9	-	-
Dibenz(a,h)anthracene	µg/L	<0.56	<110	<110	<0.56	<0.56	<0.56	<1.1	<2.8	20	100
2,4-Dimethylphenol	µg/L	<1.6	<320	1,400	<1.6	<1.6	<1.6	<3.2	600	-	-
Fluoranthene	µg/L	<0.42	<83	<83	2.5	<0.42	<0.42	<0.83	<2.1	80	400
Fluorene	µg/L	<0.61	<120	<130>	5.6	<0.61	<0.61	<1.2	<3.0	80	400
Indeno(1,2,3-cd)Pyrene	µg/L	<0.54	<110	<110	<0.54	<0.54	<0.54	<1.1	<2.7	-	-
2-Methylnaphthalene	µg/L	<0.76	1,200	2,300	27	<0.76	<0.76	8.1	520	-	-
2-Methylphenol	µg/L	<1.2	<240	910	<1.2	<1.2	<1.2	<2.4	340	-	-
3 & 4-Methylphenol	µg/L	<1.3	<250	1,400	<1.3	<1.3	<1.3	<2.5	430	-	-
Naphthalene	µg/L	<0.73	6,100	9,300	15	<0.73	<0.73	56	4,500	8	40
Phenanthrene	µg/L	<0.41	<82	<240>	14	<0.41	<0.41	<0.82	<28>	-	-
Phenol	µg/L	<0.51	<100	580	<0.51	<0.51	<1.0	<2.5	-	-	-
Pyrene	µg/L	<0.98	<200	<200	<17>	<0.98	<0.98	<2.0	<4.9	50	250
Total SVOCs	µg/L	0.0	7,630	16,810	76.5	0.00	0.00	64.1	6,528		

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification  
Concentrations exceeding the ES have been shaded

**Table 5**  
**Remediation System Water Quality Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

**July 2003**

Analyte	Units	Influent	Precarbon	Effluent	( <sup>(1)</sup> POTW	Method	Frequency
<b>PVOCS</b>							
Benzene	ug/L	1,400	6.0	<0.19>	--	EPA 8260	Monthly
Bromoform	ug/L	<140	<2.3	<0.18	--	EPA 8260	Monthly
n-Butylbenzene	ug/L	<100	<1.6	<0.23	--	EPA 8260	Monthly
sec-Butylbenzene	ug/L	<110	<1.7	<0.25	--	EPA 8260	Monthly
Ethylbenzene	ug/L	<86	<1.4	<0.21	--	EPA 8260	Monthly
Isopropylbenzene	ug/L	<91	<1.4	<0.18	--	EPA 8260	Monthly
p-Isopropyltoluene	ug/L	<110	<1.7	<0.23	--	EPA 8260	Monthly
Methylene Chloride	ug/L	<92	<1.4	<0.30>	--	EPA 8261	Monthly
Naphthalene	ug/L	5,700	110	<0.58>	--	EPA 8260	Monthly
n-Propylbenzene	ug/L	<100	<1.6	<0.27	--	EPA 8260	Monthly
Toluene	ug/L	870	8.0	<0.17>	--	EPA 8260	Monthly
1,2,4-Trimethylbenzene	ug/L	<100	7.5	<0.24	--	EPA 8260	Monthly
1,3,5-Trimethylbenzene	ug/L	<110	<1.7>	<0.27	--	EPA 8260	Monthly
Total Trimethylbenzene	ug/L	<210	<9.2>	<0.51	--	EPA 8260	Monthly
ortho-xylene	ug/L	<110>	<4.2>	<0.18	--	EPA 8260	Monthly
meta, para-xylene	ug/L	<190	<7.8>	<0.37	--	EPA 8260	Monthly
Xylene, Total	ug/L	<290>	<12.0>	<0.55	--	EPA 8260	Monthly
Styrene	ug/L	360	6.3	<0.17	--	EPA 8260	Monthly
Total PVOCS	ug/L	8,440	151.5	1.24	( <sup>(2)</sup> 1000		

Collected July 30, 2003

< - Less Than Limit of Detection

> Between Limit of Detection and Limit of Quantification  
 Concentrations exceeding the POTW have been shaded

(1) - POTW standards for effluent discharge

(2)1000 - POTW standard for total BTEX for effluent discharge

**Table 5**  
**Remediation System Water Quality Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

**August 2003**

Analyte	Units	Influent	Precarbon	Effluent	( <sup>(1)</sup> POTW	Method	Frequency
<b>PVOCS</b>							
Benzene	µg/L	2,200	36.0	<0.16>	--	EPA 8260	Monthly
Bromoform	ug/L	<140	<2.3	<0.18	--	EPA 8260	Monthly
n-Butylbenzene	ug/L	<100	<1.6	<0.23	--	EPA 8260	Monthly
sec-Butylbenzene	ug/L	<110	<1.7	<0.25	--	EPA 8260	Monthly
Ethylbenzene	ug/L	<86	<1.4	<0.21	--	EPA 8260	Monthly
Isopropylbenzene	ug/L	<91	<1.4	<0.18	--	EPA 8260	Monthly
p-Isopropyltoluene	ug/L	<110	<1.7	<0.23	--	EPA 8260	Monthly
Methylene Chloride	ug/L	<92	<1.4	<0.12	--	EPA 8261	Monthly
Naphthalene	ug/L	6,100	330	<0.35>	--	EPA 8260	Monthly
n-Propylbenzene	ug/L	<100	<1.6	<0.27	--	EPA 8260	Monthly
Toluene	ug/L	1,200	24.0	<0.14	--	EPA 8260	Monthly
1,2,4-Trimethylbenzene	ug/L	<110>	10.0	<0.24	--	EPA 8260	Monthly
1,3,5-Trimethylbenzene	ug/L	<110	<2.3>	<0.27	--	EPA 8260	Monthly
Total Trimethylbenzene	ug/L	<210	12.3	<0.51	--	EPA 8260	Monthly
ortho-xylene	ug/L	<180>	10.0	<0.18	--	EPA 8260	Monthly
meta,para-xylene	ug/L	<280>	16.0	<0.37	--	EPA 8260	Monthly
Xylene, Total	ug/L	<460>	26.0	<0.55	--	EPA 8260	Monthly
Styrene	ug/L	560	16.0	<0.17	--	EPA 8260	Monthly
Total PVOCS	µg/L	10,630	444.3	0.51	( <sup>(2)</sup> 1000		

**Collected August 28, 2003**

< - Less Than Limit of Detection

> Between Limit of Detection and Limit of Quantification  
 Concentrations exceeding the POTW have been shaded

(1) - POTW standards for effluent discharge

(2) 1000 - POTW standard for total BTEX for effluent discharge

**Table 5**  
**Remediation System Water Quality Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**  
**September 2003**

Analyte	Units	Influent	Precarbon	Effluent	( <sup>(1)</sup> POTW	Method	Frequency
Cadmium, total	mg/L	NA	NA	<0.009	0.110	SW846 6010	Semi-Annually
Chromium, total	mg/L	NA	NA	<0.019	2.5	SW846 6010	Semi-Annually
Copper, total	mg/L	NA	NA	<0.006	2.0	SW846 6010	Semi-Annually
Lead, total	mg/L	NA	NA	<0.16	0.1	SW846 6010	Semi-Annually
Mercury, total	µg/L	NA	NA	<0.025	0.0005	245.7M/1631M	Semi-Annually
Oil and grease	mg/L	NA	NA	5.8	50	EPA 1664	Quarterly
pH, lab	s.u.	NA	NA	7.50	5.5<PH>9.5	SW846 9040	Semi-Annually
Phosphorus, total	mg/L	NA	NA	0.5	5.0	EPA 365.2	Semi-Annually
GRO	mg/L	NA	NA	<0.008	50	WI Mod GRO	Semi-Annually
DRO	mg/L	NA	NA	<0.023	50	WI Mod DRO	Semi-Annually
Analyte	Units	Influent	Precarbon	Effluent	( <sup>(1)</sup> POTW	Method	Frequency
<b>PVOCs</b>							
Benzene	µg/L	3,400	<17*	<0.23	--	EPA 8260	Monthly
n-Butylbenzene	µg/L	<180	<9.2	<0.25	--	EPA 8260	Monthly
sec-Butylbenzene	µg/L	<200	<10	<0.25	--	EPA 8260	Monthly
Ethylbenzene	µg/L	<160	<8.2	<0.21	--	EPA 8260	Monthly
Isopropylbenzene	µg/L	<150	<7.3	<0.18	--	EPA 8260	Monthly
p-Isopropyltoluene	µg/L	<180	<9.1	<0.23	--	EPA 8260	Monthly
Naphthalene	µg/L	11,000	260	<0.69*	--	EPA 8260	Monthly
t-Propylbenzene	µg/L	<220	<11	<0.27	--	EPA 8260	Monthly
Toluene	µg/L	2,400	<15*	<0.23	--	EPA 8260	Monthly
1,2,4-Trimethylbenzene	µg/L	<190	<9.6	<0.24	--	EPA 8260	Monthly
1,3,5-Trimethylbenzene	µg/L	<220	<11	<0.27	--	EPA 8260	Monthly
Total Trimethylbenzene	µg/L	<420	<20.6	<0.51	--	EPA 8260	Monthly
ortho-Xylene	µg/L	<330*	<7.4	<0.18	--	EPA 8260	Monthly
meta, para-Xylene	µg/L	<540*	<15	<0.37	--	EPA 8260	Monthly
Xylene, Total	µg/L	870	<22.4	<0.55	--	EPA 8260	Monthly
Styrene	µg/L	1,100	<8.1*	<0.17	--	EPA 8260	Monthly
<b>Total PVOCs</b>	µg/L	18,770	300.1	<b>0.69</b>	<b>(<sup>(2)</sup>1000</b>		

Collected September 29, 2003

< - Less Than Limit of Detection

&> Between Limit of Detection and Limit of Quantification  
Concentrations exceeding the POTW have been shaded

(1) POTW standards for effluent discharge

(2) 1000 - POTW standard for total BTEX for effluent discharge

(3) 0.1 - POTW standard for Total PAHs for effluent discharge

**Table 5**  
**Remediation System Water Quality Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

**September 2003 Continued**

Analyte	Units	Effluent	<sup>(1)</sup> POTW	Method	Frequency
<b>PAHs</b>					
Acenaphthene	ug/L	<0.022	--	EPA 8310	Quarterly
Acenaphthylene	ug/L	<0.082	--	EPA 8310	Quarterly
Anthracene	ug/L	<0.026	--	EPA 8310	Quarterly
Benzo(a)anthracene	ug/L	<0.019	--	EPA 8310	Quarterly
Benzo(a)pyrene	ug/L	<0.018	--	EPA 8310	Quarterly
Benzo(b)fluoranthene	ug/L	<0.020	--	EPA 8310	Quarterly
Benzo(g,h,i)perylene	ug/L	<0.021	--	EPA 8310	Quarterly
Benzo(k)fluoranthene	ug/L	<0.018	--	EPA 8310	Quarterly
Chrysene	ug/L	<0.018	--	EPA 8310	Quarterly
Dibenz(a,h)anthracene	ug/L	<0.051	--	EPA 8310	Quarterly
Fluoranthene	ug/L	<0.012	--	EPA 8310	Quarterly
Fluorene	ug/L	<0.022	--	EPA 8310	Quarterly
Indeno(1,2,3-cd) Pyrene	ug/L	<0.022	--	EPA 8310	Quarterly
Methyl-1-naphthalene	ug/L	<0.055*	--	EPA 8310	Quarterly
Methyl-2-naphthalene	ug/L	0.14	--	EPA 8310	Quarterly
Naphthalene	ug/L	0.20	--	EPA 8310	Quarterly
Phenanthrene	ug/L	<0.057*	--	EPA 8310	Quarterly
Pyrene	ug/L	<0.013	--	EPA 8310	Quarterly
<b>Total PAHs</b>	ug/L	<b>0.452</b>	<sup>(3)</sup> 0.1		

Collected September 29, 2003

< - Less Than Limit of Detection

<> Between Limit of Detection and Limit of Quantification  
Concentrations exceeding the POTW have been shaded

(1) - POTW standards for effluent discharge

(2)1000 - POTW standard for total BTEX for effluent discharge  
(3)0.1 - POTW standard for Total PAHs for effluent discharge

**Table 5**  
**Remediation System Water Quality Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

**October 2003**

Analyte	Units	Influent	Precarbon	Effluent	( <sup>(1)</sup> POTW	Method	Frequency
<b>PVOCS</b>							
Benzene	µg/L	1,200	<3.4>	<0.37>	--	EPA 8260	Monthly
Bromoform	ug/L	<430>	<2.2	<0.18	--	EPA 8260	Monthly
n-Butylbenzene	ug/L	<180	<2.9	<0.23	--	EPA 8260	Monthly
sec-Butylbenzene	ug/L	<200	<3.1	<0.25	--	EPA 8260	Monthly
Ethylbenzene	ug/L	<210>	<2.6	<0.21	--	EPA 8260	Monthly
Isopropylbenzene	ug/L	<150	<2.3	<0.18	--	EPA 8260	Monthly
p-Isopropyltoluene	ug/L	<180	<2.8	<0.23	--	EPA 8260	Monthly
Naphthalene	ug/L	6,100	140	<0.39	--	EPA 8260	Monthly
n-Propylbenzene	ug/L	<220	<3.4	<0.27	--	EPA 8260	Monthly
Toluene	ug/L	790	<5.5>	<0.29>	--	EPA 8260	Monthly
1,2,4-Trimethylbenzene	ug/L	<190	<5.6>	<0.24	--	EPA 8260	Monthly
1,3,5-Trimethylbenzene	ug/L	<220	<3.4	<0.27	--	EPA 8260	Monthly
Total Trimethylbenzene	ug/L	<420	<5.6>	<0.51	--	EPA 8260	Monthly
ortho-xylene	ug/L	<150	<3.9>	<0.18	--	EPA 8260	Monthly
meta-xylene	ug/L	<300	<7.0>	<0.37	--	EPA 8260	Monthly
Xylene, Total	ug/L	<450	<10.9>	<0.55	--	EPA 8260	Monthly
Styrene	ug/L	<140	<4.3>	<0.17	--	EPA 8260	Monthly
<b>Total PVOCS</b>	µg/L	<b>8,730</b>	<b>169.7</b>	<b>0.29</b>	<sup>(2)</sup> 1000		

Collected October 29, 2003

< - Less Than Limit of Detection

> - Between Limit of Detection and Limit of Quantification

Concentrations exceeding the POTW have been shaded

<sup>(1)</sup> POTW standards for effluent discharge

<sup>(2)</sup>1000 - POTW standard for total BTEx for effluent discharge

**Table 5**  
**Remediation System Water Quality Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

**November 2003**

Analyte	Units	Influent	Precarbon	Effluent	<sup>(1)</sup> POTW	Method	Frequency
<b>PVOCs</b>							
Benzene	ug/L	2,000	23	<0.71>	--	EPA 8260	Monthly
Bromoform	ug/L	<220	<5.5	<0.28	--	EPA 8260	Monthly
n-Butylbenzene	ug/L	<250	<6.3	<0.31	--	EPA 8260	Monthly
sec-Butylbenzene	ug/L	<260	<6.6	<0.33	--	EPA 8260	Monthly
Ethylbenzene	ug/L	<210	<5.2	<0.26	--	EPA 8260	Monthly
Isopropylbenzene	ug/L	<290	<7.3	<0.36	--	EPA 8260	Monthly
p-Isopropyltoluene	ug/L	<290	<6.1	<0.30	--	EPA 8260	Monthly
Naphthalene	ug/L	6,400	410	2.2	--	EPA 8260	Monthly
1,1-Tropylbenzene	ug/L	<270	<6.7	<0.34	--	EPA 8260	Monthly
Toluene	ug/L	1,700	33	<0.57>	--	EPA 8260	Monthly
1,2,4-Trimethylbenzene	ug/L	<240	<12>	<0.31	--	EPA 8260	Monthly
1,3,5-Trimethylbenzene	ug/L	<310	<7.8	<0.39	--	EPA 8260	Monthly
Total Trimethylbenzene	ug/L	<550	<12>	<0.70	--	EPA 8260	Monthly
ortho-xylene	ug/L	<250>	<13>	<0.27	--	EPA 8260	Monthly
meta, para-xylylene	ug/L	<490	<22>	<0.62	--	EPA 8260	Monthly
Xylyne, Total	ug/L	<250>	<35>	<0.89	--	EPA 8260	Monthly
Styrene	ug/L	<590>	<16>	<0.32	--	EPA 8260	Monthly
<b>Total VOCs</b>	ug/L	<b>10,940</b>	<b>529.0</b>	<b>3.48</b>	<sup>(2)</sup> 1000		

Collected November 19, 2003

< - Less Than Limit of Detection

<> Between Limit of Detection and Limit of Quantification

Concentrations exceeding the POTW have been shaded

<sup>(1)</sup>- POTW standards for effluent discharge

<sup>(2)</sup>1000 - POTW standard for total BTEx for effluent discharge

**Table 6**  
**Remediation System Air Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

**July 2003**

Analyte	Units	Air Stripper	1st Stage Carbon	Effluent	Method	Frequency
<b>VOCs</b>						
Volume Collected	Liters	3.0	3.0	5.0		Monthly
Benzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Benzene	mg/m <sup>3</sup>	<6.67	<6.67	<6.67	NIOSH 1501	Monthly
Ethylbenzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Ethylbenzene	mg/m <sup>3</sup>	<6.67	<6.67	<6.67	NIOSH 1501	Monthly
Hydrocarbons (total)	mg	0.030	0.047	0.118	NIOSH 1550	Monthly
Hydrocarbons (total)	mg/m <sup>3</sup>	10.0	15.7	39.3		Monthly
Toluene	mg	<0.02	<0.02	0.021	NIOSH 1501	Monthly
Toluene	mg/m <sup>3</sup>	<6.67	<6.67	7.0	NIOSH 1501	Monthly
Xylyne, Total	mg	<0.03	<0.03	<0.03	NIOSH 1501	Monthly
Xylyne, Total	mg/m <sup>3</sup>	<10.0	<10.0	<10.0		Monthly

**Collected July 30, 2003**

< - Less Than Limit of Detection

> Between Limit of Detection and Limit of Quantification

**August 2003**

Analyte	Units	Air Stripper	1st Stage Carbon	Effluent	Method	Frequency
<b>VOCs</b>						
Volume Collected	Liters	3.0	3.0	5.0		Monthly
Benzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Benzene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0	NIOSH 1501	Monthly
Ethylbenzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Ethylbenzene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0	NIOSH 1501	Monthly
Hydrocarbons (total)	mg	<0.03	0.045	0.078	NIOSH 1550	Monthly
Hydrocarbons (total)	mg/m <sup>3</sup>	<10	15.0	15.6	NIOSH 1501	Monthly
Toluene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Toluene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0		Monthly
Xylyne, Total	mg	<0.03	<0.03	<0.03	NIOSH 1501	Monthly
Xylyne, Total	mg/m <sup>3</sup>	<10.0	<10.0	<6.0		Monthly

**Collected August 28, 2003**

< - Less Than Limit of Detection

> Between Limit of Detection and Limit of Quantification

**Table 6**  
**Remediation System Air Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

September 2003

Analyte	Units	Air Stripper	VOCs			Method	Frequency
			1st Stage Carbon	Effluent			
Volume Collected	Liters	3.0	3.0	5.0			Monthly
Benzene	mg	<0.02	<0.02	0.026	NIOSH 1501	Monthly	
Benzene	mg/m <sup>3</sup>	<6.67	<6.67	5.2		Monthly	
Ethylbenzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly	
Ethylbenzene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0		Monthly	
Hydrocarbons (total)	mg	0.064	0.045	0.127	NIOSH 1550	Monthly	
Hydrocarbons (total)	mg/m <sup>3</sup>	21.3	15.0	25.4		Monthly	
Toluene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly	
Toluene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0		Monthly	
Xylene, Total	mg	<0.03	<0.03	0.031	NIOSH 1501	Monthly	
Xylene, Total	mg/m <sup>3</sup>	<10.0	<10.0	6.2		Monthly	

Collected September 29, 2003

< - Less Than Limit of Detection

> Between Limit of Detection and Limit of Quantification

October 2003

Analyte	Units	Air Stripper	VOCs			Method	Frequency
			1st Stage Carbon	Effluent			
Volume Collected	Liters	3.0	3.0	5.0			Monthly
Benzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly	
Benzene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0		Monthly	
Ethylbenzene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly	
Ethylbenzene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0		Monthly	
Hydrocarbons (total)	mg	<0.03	0.043	0.070	NIOSH 1550	Monthly	
Hydrocarbons (total)	mg/m <sup>3</sup>	<10.0	14.3	14.0		Monthly	
Toluene	mg	<0.02	<0.02	<0.02	NIOSH 1501	Monthly	
Toluene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0		Monthly	
Xylene, Total	mg	<0.03	<0.03	<0.03	NIOSH 1501	Monthly	
Xylene, Total	mg/m <sup>3</sup>	<10.0	<10.0	<6.0		Monthly	

Collected October 29, 2003

< - Less Than Limit of Detection

> Between Limit of Detection and Limit of Quantification

**Table 6**  
**Remediation System Air Monitoring Results**  
**Northern States Power, Ashland, Wisconsin**

November 2003

Analyte	Units	Air Stripper	VOCs			Frequency
			1st Stage Carbon	Effluent	Method	
Volume Collected	Liters	3.0	3.0	5.0	NIOSH 1501	Monthly
Benzene	mg/m <sup>3</sup>	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Benzene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0	NIOSH 1501	Monthly
Ethylbenzene	mg/m <sup>3</sup>	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Ethylbenzene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0	NIOSH 1501	Monthly
Hydrocarbons (total)	mg/m <sup>3</sup>	<0.03	<0.03	<0.03	NIOSH 1550	Monthly
Hydrocarbons (total)	mg/m <sup>3</sup>	<10.0	<10.0	<6.00	NIOSH 1501	Monthly
Toluene	mg/m <sup>3</sup>	<0.02	<0.02	<0.02	NIOSH 1501	Monthly
Toluene	mg/m <sup>3</sup>	<6.67	<6.67	<4.0	NIOSH 1501	Monthly
Xyrene, Total	mg/m <sup>3</sup>	<0.03	<0.03	<0.03	NIOSH 1501	Monthly
Xyrene, Total	mg/m <sup>3</sup>	<10.0	<10.0	<6.0	NIOSH 1501	Monthly

Collected November 19, 2003

< - Less Than Limit of Detection

<> Between Limit of Detection and Limit of Quantification

**TABLE 7**  
**AIR SAMPLING, TESTING AND MASS EMISSIONS RESULTS**

Sample Date	Total Elapsed Time (days) <sup>1</sup>	Sample Type (Influent or Effluent)	Air Flow Rate (CFM)	Effluent Temp. (F)	Total Hydrocarbons (mg/m <sup>3</sup> ) <sup>2</sup>	Benzene (mg/m <sup>3</sup> ) <sup>2</sup>	Total Hydrocarbon Rate (lbs/day) <sup>3</sup>	Benzene Rate (lbs/day) <sup>3</sup>	Cumulative Mass of Hydrocarbons Removed by Carbon (lbs.) <sup>4</sup>	Cumulative Mass of Benzene Removed by Carbon (lbs.) <sup>4</sup>	Cumulative Mass of Hydrocarbons Emitted (lbs.) <sup>4</sup>	Cumulative Mass of Benzene Emitted (lbs.) <sup>4</sup>	
28-Sep-00	2	Effluent	176	70	5	3.33	0.08	0.05	-	-	0.2	0.1	
19-Jan-01	21	Influent	176	45	45.5	9.1	0.71	0.14	10.36	0.00	4.2	2.8	
30-Mar-01	84	Effluent	176	-	71.7	26.3	1.1	0.41	50.73	18.08	-	-	
30-Mar-01	84	Effluent	176	52	30.4	7.87	0.47	0.12	-	-	33.9	10.4	
11-Apr-01	96	Influent	176	-	33	7.87	0.51	0.12	56.32	19.14	-	-	
11-Apr-01	96	Effluent	176	62	3	2	0.05	0.03	-	-	34.5	10.8	
17-May-01	110	Influent	176	68	5	3.33	0.08	0.05	-	-	35.6	11.5	
13-Jun-01	125	Effluent	176	80	5	3.33	0.08	0.05	-	-	36.7	12.3	
31-Jul-01	135	Effluent	176	80	5	3.33	0.08	0.05	-	-	37.5	12.8	
7-Dec-01	196	Influent	176	35	60	10	0.93	0.16	116.90	26.49	-	-	
7-Dec-01	196	Effluent	176	35	5	3.33	0.08	0.05	-	-	44.21	17.2	
22-Feb-02	232	Influent	176	30	303	3.9	2	0.05	0.03	284.47	47.15	-	-
22-Feb-02	232	Effluent	176	30	3	2	0.05	0.02	300.76	50.41	45.8	18.4	
4-Apr-02	267	Influent	176	55	33	8	0.51	0.12	-	-	47.5	19.4	
4-Apr-02	267	Effluent	176	55	3	2	0.05	0.03	-	-	-	-	
9-Aug-02	333	Influent	15	80	1270	311	1.68	0.41	473.04	91.27	-	-	
9-Aug-02	333	Effluent	15	80	236	65.8	0.31	0.09	-	-	96.8	30.4	
31-Oct-02	456	Influent	125	32	2100	410	23.14	4.52	1919.39	373.59	-	-	
31-Oct-02	456	Intermediate	125	32	32	3.33	0.36	0.04	-	-	-	-	
31-Oct-02	456	Effluent	125	32	16.6	2	0.18	0.02	-	-	98.3	31.8	
27-Nov-02	470	Influent	125	25	1780	500	19.61	5.51	2192.53	450.21	-	-	
27-Nov-02	470	Intermediate	125	25	15.3	3.33	0.17	0.04	-	-	-	-	
27-Nov-02	470	Effluent	125	25	3	2	0.03	0.02	-	-	98.8	32.1	
30-Jan-03	534	Influent	125	20	19.7	3.33	0.20	0.04	-	-	445.01	-	
30-Jan-03	534	Intermediate	125	20	6.67	0.22	0.07	-	-	-	-	-	
30-Jan-03	534	Effluent	125	20	23	10.7	0.25	-	-	-	115.0	39.7	
19-Feb-03	554	Influent	125	19	5	3.33	0.06	0.04	-	-	-	-	
19-Feb-03	554	Intermediate	125	19	5	3.33	0.06	0.04	-	-	-	-	
19-Feb-03	554	Effluent	125	19	11.2	4.6	0.12	0.05	-	-	117.5	40.7	
2-Apr-03	580	Influent	125	29	22	3.33	0.24	0.04	2187.11	445.42	-	-	
2-Apr-03	580	Intermediate	125	29	47.3	14.7	0.62	0.16	-	-	-	-	
2-Apr-03	580	Effluent	125	29	26.6	11.4	0.29	0.13	-	-	125.1	43.9	
23-Apr-03	586	Influent	125	29	66.3	18.3	0.73	0.20	2198.52	444.62	-	-	
23-Apr-03	586	Intermediate	125	29	20.7	3.33	0.23	0.04	-	-	-	-	
23-Apr-03	586	Effluent	125	29	18.6	5.8	0.20	0.06	-	-	128.2	45.0	
21-May-03	619	Influent	125	29	43	10	0.47	0.04	2198.51	445.69	-	-	
21-May-03	619	Intermediate	125	29	36.7	3.33	0.40	0.04	-	-	-	-	
21-May-03	619	Effluent	125	29	31.2	5.8	0.34	0.06	-	-	136.3	46.4	
25-Jun-03	654	Influent	125	29	22	3.33	0.24	0.04	2196.74	442.57	-	-	
25-Jun-03	654	Intermediate	125	29	47.3	14.7	0.52	0.16	-	-	-	-	
25-Jun-03	654	Effluent	125	29	26.6	11.4	0.29	0.13	-	-	146.5	50.8	
30-Jul-03	684	Influent	125	29	10	3.33	0.11	0.04	2187.05	442.57	-	-	
30-Jul-03	684	Intermediate	125	29	15.7	3.33	0.17	0.04	-	-	-	-	
30-Jul-03	684	Effluent	125	29	39.3	0.43	0.04	0.06	-	-	159.5	51.9	
28-Aug-03	713	Influent	125	29	5	3.33	0.06	0.04	2163.67	443.00	-	-	
28-Aug-03	713	Intermediate	125	29	3.33	0.17	0.04	-	-	-	-	-	
28-Aug-03	713	Effluent	125	29	15.6	2	0.17	0.02	-	-	164.5	52.6	
29-Sep-03	745	Influent	125	29	21.3	3.33	0.23	0.04	2182.22	442.34	-	-	
29-Sep-03	745	Intermediate	125	29	15	3.33	0.17	0.04	-	-	-	-	
29-Sep-03	745	Effluent	125	29	25.4	5.2	0.28	0.06	-	-	173.5	54.4	
29-Oct-03	775	Influent	125	29	5	3.33	0.06	0.04	2179.24	442.78	-	-	
29-Oct-03	775	Intermediate	125	29	14.3	3.33	0.16	0.04	-	-	178.1	55.1	
29-Oct-03	775	Effluent	125	29	14	2	0.15	0.02	-	-	-	-	
19-Nov-03	796	Influent	125	29	5	3.33	0.06	0.04	2179.71	443.09	-	-	
19-Nov-03	796	Intermediate	125	29	3	3.33	0.06	0.04	-	-	178.8	55.5	

(1) Total Elapsed Time, in days, only for days of remediation system operation, not days since start up.

(2) When a below detection result occurs, the assumed value is half of the detection limit.

(3) Daily emission rate based on laboratory results.

(4) Emission rate to date calculated from average daily emission rate and total days of remediation system operation.

**Table 8**  
**Water Effluent Sampling, Testing And Mass Discharge Results**

Sample Date	Total Elapsed Time (days) <sup>1</sup>	Sample Type <sup>5</sup>	Cumulative Volume of Treated Effluent (gal.)	VOCs ( $\mu\text{g/L}$ ) <sup>2</sup>	Benzene ( $\text{ug/L}$ ) <sup>2</sup>	Cumulative Mass of VOCs Removed (lbs.) <sup>3</sup>	Cumulative Mass of Benzene Removed (lbs.) <sup>3</sup>	Cumulative Mass of VOCs Discharged (lbs.) <sup>4</sup>	Cumulative Mass of Benzene Discharged (lbs.) <sup>4</sup>
5-Oct-00	9	Influent <sup>5</sup>	121,985	60,000	0.94	10.8	5.3	0.00114	0.00008
5-Oct-00	9	Effluent	10,552	12.9	0.62				
19-Jan-01	21	Inlet <sup>6</sup>	859.5	90.4					
19-Jan-01	21	Mid Carbon	17.3	0.7					
19-Jan-01	21	Effluent	17,346	16.6	0.7	17.7	8.7	0.00208	0.00012
30-Mar-01	84	Inlet <sup>6</sup>	1,120.60	140					
30-Mar-01	84	Effluent	44,613	14.45	0.05	45.6	22.4	0.00520	0.00024
11-Apr-01	96	Influent <sup>5</sup>	100,629	46,000					
11-Apr-01	96	Inlet <sup>6</sup>	557.5	110					
11-Apr-01	96	Mid Carbon	50.73	5.1					
11-Apr-01	96	Effluent	54,636	13.79	0.94	54.0	26.3	0.00636	0.00031
17-May-01	110	Influent <sup>5</sup>	58,967	23.46	1.3	57.6	27.9	0.00721	0.00036
13-Jun-01	125	Effluent	61,994	7.74	0.05	59.4	28.8	0.00735	0.00036
13-Jun-01	135	Influent <sup>5</sup>	97,450	57,000					
31-Jul-01	135	Effluent	65,758	12.36	0.05	63.2	30.7	0.00783	0.00036
20-Sep-01	157	Influent <sup>5</sup>	113,925	58,000					
20-Sep-01	157	Inlet <sup>6</sup>	3,205	1,100					
20-Sep-01	157	Effluent	91,894	19.23	0.05	88.1	43.4	0.01203	0.00038
7-Dec-01	196	Influent <sup>5</sup>	101,820	52,000					
7-Dec-01	196	Inlet <sup>6</sup>	4,153.5	530					
7-Dec-01	196	Effluent	136,300	9,835	0.05	125.7	62.7	0.01567	0.00039
14-Feb-02	224	Influent	83,055	36,000					
14-Feb-02	224	Precarbon	35,355.3	7,200					
14-Feb-02	224	Effluent	181,000	8.1	0.2	156.7	75.7	0.01869	0.00047
21-Mar-02	256	Influent	143,140	55,000					
21-Mar-02	256	Precarbon	15,716.5	1,600					
21-Mar-02	256	Effluent	202,700	88.22	67	182.6	85.3	0.03467	0.01264

(1) Total Elapsed Time, in days, only for days of remediation system operation, not days since start-up.

(2) When a below detection result occurs, the assumed value is half of the detection limit.

(3) Removal based on Influent vs. Effluent

(4) Emission rate to date calculated from average concentrations in effluent and total days of remediation system operation.

(5) This sample was collected at the oil-water separator discharge, prior to the air diffuser.

(6) This sample was collected at the inlet to the liquid phase carbon.

**Table 8**  
**Water Effluent Sampling, Testing And Mass Discharge Results**

Sample Date	Total Elapsed Time (days) <sup>1</sup>	Sample Type	Cumulative Volume of Treated Effluent (gal.)	VOCs ( $\mu\text{g/L}$ ) <sup>2</sup>	Benzene ( $\mu\text{g/L}$ ) <sup>2</sup>	Cumulative Mass of VOCs Removed (lbs.) <sup>3</sup>	Cumulative Mass of Benzene Removed (lbs.) <sup>3</sup>	Cumulative Mass of VOCs Discharged (lbs.) <sup>4</sup>	Cumulative Mass of Benzene Discharged (lbs.) <sup>4</sup>
11-Jun-02	323	Influent	63,570	23,000					
11-Jun-02	323	Precarbon	26,320.0	6,400	1,100	226.2	100.6	0.90481	0.76458
11-Jun-02	323	Effluent	286,524	1,244	41,000				
8-Aug-02	393	Influent	87,060	26,320.0	18,695				
8-Aug-02	393	Precarbon	65,541	4,000	304.3	136.5	7,26406	4,67835	
8-Aug-02	393	Effluent	402,800	5,600					
31-Oct-02	456	Influent	27,080.0	13,000					
31-Oct-02	456	Precarbon	24,362.5	1,600	324.9	139.9	9,30128	6,01517	
31-Oct-02	456	Effluent	502,600	2438.3					
27-Nov-02	470	Influent	52,350.0	22,000					
27-Nov-02	470	Precarbon	15,633.0	7,300					
27-Nov-02	470	Effluent	519,000	4,600	331.1	142.2	10,18390	6,64674	
18-Dec-02	491	Influent	45,325.0	19,000					
18-Dec-02	491	Precarbon	7,685.0	2,700					
18-Dec-02	491	Effluent	542,800	4,785.0	3,300	339.2	145.4	11,13420	7,30426
30-Jan-03	534	Influent	35,275.0	9,600					
30-Jan-03	534	Precarbon	4,230.0	1,700					
30-Jan-03	534	Effluent	581,400	4,584.7	2,200	349.1	147.7	12,61092	8,01520
19-Feb-03	554	Influent	71,520.0	32,000					
19-Feb-03	554	Precarbon	3,149.0	81					
19-Feb-03	554	Effluent	598,000	4,004.0	1,500	358.4	152.0	13,16556	8,22366
2-Apr-03	580	Influent	20,876.0	6,300					
2-Apr-03	580	Precarbon	1,553.0	120					
2-Apr-03	580	Effluent	623,300	114.7	22	362.8	153.3	13,18977	8,22832
23-Apr-03	596	Influent	30,060.0	9,500					
23-Apr-03	596	Precarbon	2,095.0	29					
23-Apr-03	596	Effluent	645,300	3.0	0.15	368.3	155.0	13,19032	8,22835
21-May-03	619	Influent	25,470.0	6,100					
21-May-03	619	Precarbon	5,491.0	71					
21-May-03	619	Effluent	687,700	3.1	0.15	377.3	157.2	13,19142	8,22840
25-Jun-03	654	Influent	42,680.0	26,000					
25-Jun-03	654	Precarbon	3,310.0	150					
25-Jun-03	654	Effluent	721,000	1.9	0.12	389.2	164.4	13,19195	8,22843
30-Jul-03	684	Influent	8,440.0	1,400					
30-Jul-03	684	Precarbon	144.0	6					
30-Jul-03	684	Effluent	748,800	1.2	0.19	391.1	164.7	13,19224	8,22848
28-Aug-03	713	Influent	10,630.0	2,200					
28-Aug-03	713	Precarbon	434.3	36					
28-Aug-03	713	Effluent	761,700	0.5	0.16	392.3	165.0	13,19229	8,22849
29-Sep-03	745	Influent	18,770.0	3,400					
29-Sep-03	745	Precarbon	300.1	17					
29-Sep-03	745	Effluent	781,500	0.7	0.12	395.4	165.5	13,19241	8,22851
29-Oct-03	775	Influent	8,730.0	1,200					
29-Oct-03	775	Precarbon	169.7	3					
29-Oct-03	775	Effluent	793,400	0.3	0.18	396.3	165.7	13,19243	8,22853
19-Nov-03	796	Influent	10,940.0	2,000					
19-Nov-03	796	Precarbon	529.0	23					
19-Nov-03	796	Effluent	799,900	3.5	0.71	396.8	165.8	13,19262	8,22857

(1) Total Elapsed Time, in days, only for days of remediation system operation, not days since start-up.

(2) When a below detection result occurs, the assumed value is half of the detection limit.

(3) Removal based on Influent vs. Effluent

(4) Emission rate to date calculated from average concentrations in effluent and total days of remediation system operation.

(5) This sample was collected at the oil-water separator discharge, prior to the air diffuser.

(6) This sample was collected at the inlet to the liquid phase carbon.

**Table 9**  
**Summary of Coal Tar and Groundwater Volumes Removed**

Date	Cumulative Volume of Coal Tar Removed (gals)	Cumulative Volume of Coal Tar Removed (lbs)	Cumulative Volume of Groundwater Removed from Wells EW-1, EW-2, EW-3 (gals)	Cumulative Volume of Groundwater Removed from Well EW-4 (gals)	Cumulative Volume of Groundwater Removed (gals)
2/20/2001	554.2	4,853	22,826	0	22,826
3/30/2001	850.0	7,443	44,613	0	44,613
4/26/2001	915.2	8,014	56,978	0	56,978
5/17/2001	1,078.2	9,442	58,967	0	58,967
6/11/2001	1,291.2	11,307	61,094	0	61,094
7/31/2001	1,535.2	13,444	65,758	0	65,758
8/15/2001	1,578.0	13,819		0	
9/12/2001			81,524	0	81,524
9/28/2001	1,789.9	15,674	104,500	0	104,500
11/12/2001*	2,486.4	21,773	104,900	0	104,900
11/13/2001	2,551.6	22,344	106,200	0	106,200
11/14/2001	2,559.7	22,415	107,600	0	107,600
11/15/2001	2,600.5	22,772	114,200	0	114,200
11/28/2001	2,682.0	23,486	125,200	0	125,200
12/3/2001	2,779.8	24,342	131,500	0	131,500
12/12/2001	2,877.6	25,199	142,300	0	142,300
12/19/2001	2,975.4	26,055	155,328	0	155,328
1/3/2002	3,105.8	27,197	172,000	0	172,000
2/5/2002	3,105.7	27,197	173,116	0	173,116
2/11/2002	3,122.0	27,340	178,300	0	178,300
2/12/2002	3,122.1	27,340	180,100	0	180,100
2/19/2002	3,122.1	27,340	182,900	0	182,900
3/6/2002	3,138.4	27,483	183,000	0	183,000
3/11/2002	3,187.3	27,911	194,400	0	194,400
3/18/2002	3,219.9	28,196	199,400	0	199,400
3/27/2002	3,317.7	29,053	210,500	0	210,500
4/3/2002	3,350.3	29,338	216,600	0	216,600
4/9/2002	3,399.2	29,767	224,000	0	224,000
4/23/2002	3,473.6	30,419	238,100	0	238,100
4/30/2002	3,514.3	30,775	246,700	0	246,700
5/8/2002	3,538.8	30,989	256,900	0	256,900
5/15/2002	3,587.7	31,418	264,500	0	264,500
5/20/2002	3,612.1	31,631	266,900	0	266,900
5/24/2002	3,636.5	31,845	268,365	10,935	279,300
5/28/2002	3,652.8	31,988	272,215	13,185	285,400
6/17/2002	3,669.1	32,131	287,693	28,507	316,200
6/25/2002	3,726.2	32,631	295,908	35,492	331,400
7/2/2002	3,766.9	32,987	299,147	42,153	341,300

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Date	Cumulative Volume of Coal Tar Removed (gals)	Cumulative Volume of Coal Tar Removed (lbs)	Cumulative Volume of Groundwater Removed from Wells EW-1, EW-2, EW-3 (gals)	Cumulative Volume of Groundwater Removed from well EW-4 (gals)	Cumulative Volume of Groundwater Removed (gals)
7/9/2002	3,783.2	33,130	306,783	42,717	349,500
7/11/2002	3,799.5	33,272	314,710	49,990	364,700
7/22/2002	3,824.0	33,487	319,384	54,516	373,900
7/26/2002	3,864.7	33,843	320,542	57,158	383,700
8/8/2002	3,905.5	34,201	334,406	68,394	402,800
8/15/2002	3,921.8	34,343	340,391	68,609	409,000
9/9/2002	3,942.1	34,521	343,084	79,816	422,900
9/19/2002	4,003.3	35,057	350,659	91,441	442,100
9/26/2002	4,003.3	35,057	356,565	91,535	448,100
10/4/2002	4,003.3	35,057	363,335	93,265	456,400
10/11/2002	4,003.3	35,057	374,863	94,737	469,600
10/18/2002	4,027.8	35,272			485,600
10/25/2002	4,158.2	36,414	379,459	116,901	496,360
10/31/2002	4,166.3	36,484	381,556	121,045	502,600
11/8/2002	4,166.3	36,484			511,800
11/21/2002	4,753.3	41,625	387,629	124,272	511,900
11/26/2002	4,773.6	41,803	391,434	127,566	519,000
12/4/2002	4,789.9	41,945	398,205	129,795	528,000
12/10/2002	4,802.2	42,053	403,230	130,971	534,200
12/18/2002	4,826.6	42,267	410,356	132,444	542,800
12/23/2002	4,842.9	42,409	412,967	133,333	546,300
12/30/2002	4,855.1	42,516	415,842	134,458	550,300
1/10/2003	4,883.7	42,767	425,515	136,125	561,700
1/15/2003	4,900.0	42,910	429,541	136,859	566,400
1/20/2003	4,920.3	43,087	434,133	137,567	571,700
1/30/2003	4,982.9	43,373	442,556	138,884	581,400
2/13/2003	4,989.6	43,694	454,019	140,881	594,900
2/19/2003	5,007.8	43,854	456,851	141,149	598,000
2/26/2003	5,036.3	44,103	463,081	142,019	605,100
3/4/2003			468,458	142,742	611,200
3/27/2003			471,979	143,488	615,467
4/2/2003	5,097.5	44,639	478,430	144,870	623,300
4/9/2003	5,158.7	45,175	483,745	145,855	629,600
4/16/2003	5,219.9	45,711	487,333	148,267	635,600
4/23/2003	5,281.1	46,247	492,504	152,796	645,300
4/29/2003	5,342.3	46,783	495,129	156,771	651,500
5/7/2003	5,403.5	47,319	498,877	158,223	658,100
5/15/2003	5,464.7	47,855	0		
5/21/2003	5,525.9	48,391	515,230	172,470	687,700
5/28/2003	5,587.1	48,926	522,943	175,357	698,300

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Date	Cumulative Volume of Coal Tar Removed (gals)	Cumulative Volume of Coal Tar Removed (lbs)	Cumulative Volume of Groundwater Removed from Wells EW-1, EW-2, EW-3 (gals)	Cumulative Volume of Groundwater Removed from well EW-4 (gals)	Cumulative Volume of Groundwater Removed (gals)
6/3/2003	5,648.3	49,462	524,602	176,598	701,200
6/10/2003	5,709.5	49,998	529,728	178,472	708,200
6/17/2003	5,770.7	50,534	534,411	179,789	714,200
6/26/2003	5,831.9	51,070	540,050	180,950	721,000
7/2/2003	5,893.1	51,606	543,291	181,909	725,200
7/9/2003	5,954.3	52,142	731,900	0	731,900
7/16/2003	6,015.5	52,678	553,174	185,526	738,700
7/22/2003	6,076.7	53,214	556,643	186,957	743,600
7/30/2003	6,137.9	53,750	560,726	188,074	748,800
8/6/2003	6,199.1	54,286	562,275	188,825	751,100
8/20/2003	6,260.3	54,822	567,361	191,139	758,500
8/28/2003	6,321.5	55,358	761,700	0	761,700
9/4/2003	6,382.7	55,894	572,759	191,841	764,600
9/11/2003	6,443.9	56,429	576,361	191,139	767,500
9/19/2003	6,505.1	56,965	579,259	191,841	771,100
9/25/2003	6,566.3	57,501	578,399	197,101	775,500
10/3/2003	6,627.5	58,037	781,500	0	781,500
10/9/2003	6,688.7	58,573	583,771	198,229	782,000
10/24/2003	6,749.9	59,109	588,551	201,950	790,500
10/29/2003	6,811.1	59,645	591,451	201,950	793,400
11/6/2003	6,872.3	60,181	595,851	201,950	797,800
11/13/2003	6,933.5	60,717	597,636	201,964	799,600
11/19/2003	6,994.7	61,253	597,753	202,147	799,900
11/25/2003	7,055.9	61,789	600,218	203,382	803,600
12/3/2003	7,117.1	62,325	602,201	205,999	808,200